

YOR9-2001-0319-US1

JC978 U.S. PRO  
10/039635  
01/02/02

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of

Black et al.

Serial No.: Unknown

Group Art Unit: Unknown

Filing Date: Concurrently Herewith

Examiner: Unknown

For: SCANNING PROBE MICROSCOPY TIPS COMPOSED OF  
NANOPARTICLES AND METHODS TO FORM SAME

Assistant Commissioner of Patents  
Washington, D.C. 20231

#2 DS  
85-02  
estates

**INFORMATION DISCLOSURE STATEMENT**

Sir:

Under the provisions of 37 CFR §1.97 through §1.99 and pursuant to applicants' duty of disclosure under 37 CFR §1.56, applicants respectfully bring the following documents listed on the attached form PTO-1449, to the attention of the Examiner in charge of the above-identified application. Copies of the listed documents are provided herewith for the convenience of the Examiner. This citation does not constitute an admission that the references are relevant or material to the claims. They are only cited as constituting related art of which the applicants are aware.

It is respectfully requested that the listed references be considered by the Examiner and formally made of record in this application.

Please charge any deficiencies in fees and credit any overpayment of fees to  
Attorney's Deposit Account No. 50-0510.

Respectfully submitted,



Mohammad S. Rahman  
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Date: 1/2/2002  
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INFORMATION DISCLOSURE CITATION  
(Use several sheets if necessary)

ATTY DOCKET NO.  
YOR9-2001-0319-031

SERIAL NO.

Unknown 0

APPLICANT(S)  
Black et al.

FILING DATE

Concurrently Herewith

GROUP

Unknown

JC97039635  
01/02/02

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
CR	3,180,835	04/27/65	Peri			
CR	3,531,413	09/29/70	Rosensweig			
CR	3,814,696	06/04/74	Verdone et al.			
CR	3,965,046	06/22/76	Deffeyes			
CR	4,006,047	02/01/77	Brummett et al.			
CR	4,063,000	12/13/77	Aonuma et al.			
CR	4,687,596	08/18/87	Borduz et al.			
CR	4,728,591	03/01/88	Clark et al.			
CR	4,877,647	10/31/89	Klabunde			
CR	4,940,596	07/10/90	Wright			
CR	5,147,841	09/15/92	Wilcoxon			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
CR	WO 98/22942	05/28/98	EPO			✓	
CR	EP 0 977 212 A2	02/02/00	EPO			✓	
CR	EP 0 686 448 A2	12/13/95	EPO			✓	
CR	EP 9 469 714 A2	12/11/91	EPO				✓
CR	EP 0 113 281 A1	07/11/84	EPO				✓

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

CR D.L. Peng et al., "Characteristic Tunnel-Type Conductivity and Magnetoresistance in a CoO-Coated Monodispersive Co Cluster Assembly", Applied Physics Letters, Volume 74, Number 1, January 4, 1999, pp. 76-78.

CR Sanker et al., "Spin-Dependent Tunneling in Discontinuous Co-SiO<sub>2</sub> Magnetic Tunnel Junction", Applied Physics Letters, Volume 73, Number 4, July 27, 1998, pp. 535-537.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**INFORMATION DISCLOSURE CITATION**  
*(Use several sheets if necessary)*

ATTY DOCKET NO. **XOR9-2001-0319-PS1**

SERIAL NO. **Unknown**

APPLICANT(S)  
Black et al.

**FILING DATE**  
**Concurrently Herewith**

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Ch	5,160,452	11/03/92	Marutsuka et al.			
Ch	5,240,493	08/31/93	Zhen et al.			
Ch	5,304,382	04/19/94	Monzyk			
Ch	5,491,219	02/13/96	Mann			
Ch	5,505,996	04/09/96	Nagayama			
Ch	5,580,492	12/03/96	Bonnemann et al.			
Ch	5,698,483	12/16/97	Ong et al.			
Ch	5,766,764	06/16/98	Olli et al.			
Ch	5,824,409	10/20/98	Sellmyer et al.			
Ch	5,843,569	12/01/98	Kaitsu et al.			
Ch	5,914,361	06/22/99	Inui et al.			

## FOREIGN PATENT DOCUMENTS

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

Toshima, et al., "Polymer-protected Palladium-Platinum Bimetallic Clusters: Preparation, Catalytic Properties and Structural Considerations", CHEM. SOC. FARADAY TRANS., 1993, 89(14), pp. 2537-2543.

Murray, et al., "Self-Organization of CdSe Nanocrystallites into Three-Dimensional Quantum Dot Superlattices", SCIENCE Vol. 270, November 24, 1995, pp. 1335-1338.

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**U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

OTHER DOCUMENTS (including Author, Title, Date, etc.)  
Toyoharu Hayashi, "Catalytic Applications of Gas Evaporated Ultra-Fine Particles", Ultra-Fine Particles: Exploratory Science and Technology, Noyes Publications, 1997, pp. 355-368.

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Toyoharu Hayashi, "Catalytic Applications of Gas Evaporated Ultra-Fine Particles", Ultra Fine Particles in Science and Technology, Noyes Publications, 1997, pp. 355-368.

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**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

Docket Number (Optional) <b>Y09-2001-0319-US</b>	Application Number <b>Unknown</b>
Applicant(s) <b>Black et al.</b>	
Filing Date <b>Concurrently Herewith</b>	Group Art Unit <b>Unknown</b>

*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
CR	Schaadt et al., "Characterization and Analysis of a Novel Hybrid Magnetoelectronic Device for Magnetic Field Sensing", J. Vac. Sci. Technol., Volume 18, No. 4, July/August, 2000, pp. 1834-1837.
CR	Inomata et al., "Spin-Dependent Tunneling Through Layered Ferromagnetic Nanoparticles", Applied Physics Letters, Volume 73, Number 8, August 24, 1998, pp. 1143-1145.
CR	Gerber et al., "Magnetoresistance of Granular Ferromagnet - Insulator Films", Thin Solid Films 304 (1997) pp. 319-322.
CR	Kechrakos et al., "Scaling Behavior of the Giant Magnetoresistance of Magnetic Aggregates", Physical Review B, Volume 63, pp. 13442-1 - 13442-5.
CR	Moore et al., "Ferromagnetic-Insulator-Ferromagnetic Tunneling: Spin-Dependent Tunneling and Large Magnetoresistance in Trilayer Junctions (Invited)", J. Appl. Phys. 79 (8), April 15, 1996, pp. 4724-4729.
CR	Sun et al., "Controlled Assembly of Monodisperse E-Cobalt-Based Nanocrystals", Mat. Res. Soc. Symp. Proc. Vol. 577, 1999 Materials Research Society, pp. 385-398.
CR	Shouheng Sun Murry, C.B., "Synthesis of Monodisperse Cobalt Nanocrystals and their Assembly into Magnetic Superlattices (Invited)", J. Appl. Phys. (USA), Vol. 85, No. 8, April 15, 1999, pp. 4325-30.
CR	Black et al., "Spin Dependent Tunneling in Self Assembled Cobalt Nanocrystal Superlattices", Science (USA) Vol. 290, No. 290, No. 5494, Nov. 2000, pp. 1131-4.
CR	Li, et al., "Magnetic Recording on FePt and FePtB Intermetallic Compound Media", IEEE Transactions on Magnetics, Vol. 35, No. 2, March 1999, pp. 1077-1082.
CR	Kuo, et al., "Microstructure and magnetic properties of Fe Pt alloy films", Journal of Applied Physics, Volume 85, Number 4, 15 February 1999, pp. 2264-2269.
CR	Cebollada, et al., "Enhanced magneto-optical Kerr effect in spontaneously ordered FePt alloys: Quantitative agreement between theory and experiment", Physical Review B, Volume 50, Number 5, 1 August 1994-I, pp. 3419-3421.

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